

## Air Conditioning Ductless Single or Multi Split- System

AC ductless single and multi-split systems have become popular around the country. Because of this, many inspectors and installers are asking a common question. Does the indoor AC equipment require a disconnecting means?

The following is a review for the disconnect switch requirement associated with the indoor AC equipment that is part of an AC ductless single or multi-split system. The review is based on NFPA-70, 2011 National Electrical Code® (NEC).

Identifying the equipment is essential in the proper application of the code. We need to understand that the AC ductless single and multi-split systems appliances (AC split systems) are a **complete system**. A third party listing plays an important part in determining if the separate sections are in fact a **listed combination**. In most cases the AC split systems are investigated to an ANSI/UL 1995 or 484 standard. With this standard and our NEC definition of an appliance, Article 422 Appliance, would be our starting point. When the AC split system also contains a Hermetic motor compressor (HMC) Section 422.3 sends us to Article 440. To be clear Article 440 AC Equipment, is applicable to **all of the sections** that make the complete system.

Article 440.3 (A) states in part; Article 430 applies and Article 440 is in addition to or may amend Article 430. This is the case for the outdoor and indoor sections of the AC split system when applying the disconnect switch requirement. **Article 440 amends Article 430** and requires the disconnect switch rating according to Section 440.6 and the **location of the disconnect switch according to Section 440.14**.

So what really changed? Section 440.14 is more restrictive than Section 430.102 because it does not depend on the controller or motor location when considering the disconnect switch location; instead it focuses on the equipment. **This Section places a disconnect switch within sight and readily accessible to the indoor unit location with only two exceptions.**

Section's 440.14, Informational note Number 1, highlights the need to go back to Part VII and IX of **Article 430 for the other requirements such as type and operation**.

Section 440.3(B) Basically states, if the AC split system sections are listed as an independent appliance, the AC split system section with the HMC will follow Article 440. The other standalone-listed section may fall under Article 422, 424 and 430 or any combination. An example is a listed outdoor HMC supplying an evaporator coil unit installed within a listed Furnace appliance or listed Air handler.